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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,666	08/25/2006	Shigeru Nakatsu	2006_1367A	3796

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EXAMINER	
DARJI, PRITESH D	

ART UNIT	PAPER NUMBER
1793	

MAIL DATE	DELIVERY MODE
07/20/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/590,666	NAKATSU ET AL.	
	Examiner	Art Unit	
	PRITESH DARJI	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *8/25/2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vesely '912 in view of Toshiyuki (JP 08-034619).

Vesely teaches platinum containing catalyst is composted with alumina or other refractory inorganic oxide combinations in column 1, lines 43-55. Vesely also teaches use of sulfuric acid to dissolve alumina and forms soluble compound (See column 2, lines 20-25). In addition of sulfuric acid, Vesely also teaches use of nitric acid with sulfuric acid (See column 1, lines 59-63 and column 2, lines 5-7). Aqueous solution of acids is treated with platinum containing residue. See col.2, lines 36-54.

Vesely doesn't teach that alumina is supported on a metal carrier substrate.

Toshiyuki teaches a process to recover noble metal from metallic carrier catalyst, in which activated alumina is used as a refractory inorganic oxide which forms a layer on a metal carrier substrate (See paragraph 0011). Toshiyuki further discloses metal carrier catalyst dividing into metal carrier substrate and a catalyst bed, and collecting the precious metals out of a solution. (See claim 1 of JP 08-034619).

It would have been obvious to a person of ordinary skill in the art to perform the process of Vesely including a metal carrier for the alumina support in view of Toshiyuki because the use of the supported catalyst in a combustion engine, where purifying of exhaust gas takes place at high temperature and pressure.

Vesely teaches sulfuric acid concentration is from 25% to 90% which overlaps that instantly claimed. See column 2, lines 3-7. Concentration of nitric acid in the working example is 25% which is higher than instantly claimed concentration. Nitric acid is mixed with hydrochloric acid in the working example. Sulfuric acid can be used instead of hydrochloric acid as other alternative. See col. 2, lines 36-45. In the working example temperature of aqueous solution is 165°F to 185°F (74°C to 85°C).

Regarding nitric acid concentration, it would have been obvious to one of ordinary skill in the art at the time of the invention to use lower concentration of nitric acid because differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 105 USPQ 233, 235.

Regarding sulfuric acid concentration, the reference weight percentage range that overlap the claimed ranges and considering the claimed ranges as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference

because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.C.P.Q.549; *In re Wertheim* 191 USPQ 90 (CCPA 1976).

Applicant's arguments filed 3/24/2009 have been fully considered but they are not persuasive.

Applicant argues that Vesely doesn't teach catalyst with a mixed acid of sulfuric acid and nitric acid.

However Vesely teaches use of different acids like sulfuric acid, hydrochloric acid, nitric acid and the like with the catalyst. In the working example, mixture of hydrochloric acid and nitric acid are used with ratio of 3:1 at temperature from 165ºF (74ºC) to 185ºF (85ºC). Therefore it would have been obvious to use any of the acid stated above in the mixture form for recovery of platinum. Using above stated acids together (mixed) would give predictable result of recovery of platinum from catalyst. Thus Vesely teaches key element of "mixed acid" that applicant thinks is novel. Regarding "mixed acid" of nitric acid and sulfuric acid, an express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. In re Fout, 213 USPQ 532. Also, see MPEP 2144.06.

Applicant argues that Toshiyuki (JP 08-034619) doesn't suggest catalyst to be treated with mixed acid of nitric acid and sulfuric acid.

However Toshiyuki is not primary reference of instant examination. For the "mixed acid" primary reference Vesely is used which teaches "mixed acid" with catalyst

to recover platinum from catalyst. Toshiyuki reference is used to show use of alumina as carrier which is very well known in the art.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PRITESH DARJI whose telephone number is (571)270-5855. The examiner can normally be reached on Monday to Thursday 8:00AM EST to 6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. D./
Examiner, Art Unit 1793

/Steven Bos/

Primary Examiner, Art Unit 1793